Michael E. Nelson
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EDUCATION

Michigan State University, East Lansing, MI                                    2015 – 2017
M.A., Media and Information, Concentration in Media and Information Management

North Park University, Chicago, IL                                                  2007 – 2011
B.A., History, Summa Cum Laude

PROFESSIONAL EXPERIENCE

School of Social Work, Michigan State University                            2017 –
*Full-stack Developer*
- Continuing work on a proof-of-concept analytics dashboard that I built (previously, for a course in project management, on a team with three other students) for the interdisciplinary Michigan Stroke Transitions Trial (MISTT) project
- Writing Flask (Python) controllers and models to securely accept, preprocess, model, and persist uploaded interview, survey, and case-note data, in conjunction with case-specific Google Analytics data consumed over HTTP
- Extracting patient/caregiver goals from unstructured text data; transforming goal data into feature matrices with SciPy (Python); performing clustering analyses (k-means) with scikit-learn (Python) to assign appropriate topic labels for each
- Documenting functionality with Sphinx (Python) and dgeni (Angular.js)
- Writing unit tests to improve the resilience of the project's component Angular.js (JavaScript) and Flask (Python) applications
- Training project researchers in the use of the system

Matrix Center for Digital Humanities and Social Sciences,                 2017 –
*Front-end Developer*
- Developing response, mobile-first WordPress theming from comps

Department of Media and Information, Michigan State University            2016
*Graduate Research Assistant*
- Programmatically collected citation data from Elsevier Scopus and Thomson Reuters Web of Knowledge
- Performed bibliometric and citation analyses using Pajek and networkx (Python)

Department of Advertising and Public Relations, Michigan State University   2015 –
*Data Analyst and Research Assistant*
- Developing web implementations of the Affect Misattribution Procedure (AMP) and the Taylor Aggression Paradigm (TAP), as JavaScript applications for administration on the Qualtrics research platform
- Administering the collection of self-report data with Qualtrics, psychophysiological data with BIOPAC and AcqKnowledge, and reaction-time and eye-tracking data with DirectRT and Tobii Pro Studio

- Cleaning and transforming data for various projects using pandas (Python)

College of Arts and Letters, Michigan State University                2015 – 2016
*Web Accessibility/Usability Intern*
- Remediated websites and courseware for accessibility and usability
- Wrote technical reports on accessibility for College sub-unit decision-makers

DRW College Prep High School, Chicago, IL                             2015
*Paraprofessional and Instructor*
- Provided support and targeted teaching to students with IEPs
- Designed and implemented remedial English Language Arts courses

American Homeowner Preservation Capital Management, Chicago, IL        2012 – 2015
*Litigation and Documentation Specialist and Senior Asset Manager*
- Planned and implemented dispositions of subprime mortgages through short sale, short settlement, and foreclosure
- Wrote training documentation, and trained interns and new hires
- Managed transfers of collateral documents between the Company, servicers, counsel, and custodians

Faculty of English, Adam Mickiewicz University, Poznań, Poland        2011 – 2012
*Visiting Fulbright Lecturer*
- Designed and implemented bachelor's and master's degree courses in history and English
- Initiated exploratory committee on the prospect of starting a writing center

North Park University, Chicago, IL                                    2010
*Peer Academic Advisor and Writing Advisor*
- Assisted teaching a section of first-year rhetoric and composition
- Tutored other students in formal writing and in the use of library resources

GRANTS, FELLOWSHIPS, & AWARDS

Cultural Heritage Informatics Graduate Fellowship                     2016 – 2017
Cultural Heritage Informatics Initiative, Michigan State University

Research Experience for Master's Students Graduate Fellowship         2016
School of Information, University of Michigan

Thomas F. Baldwin Endowed Fellowship                                  2016
Department of Media and Information, Michigan State University

M.A. Merit Scholarship                                                2015 – 2016
Department of Media and Information, Michigan State University

Fulbright English Teaching Assistantship to Poland                  2011 – 2012
Fulbright Program, U.S. Department of State

Zenos and Barbara Hawkinson Prize for Best Paper in History       2010
Department of History, North Park University

Presidential Scholarship                                           2007 – 2011
North Park University

## PERSONAL & FELLOWSHIP-FUNDED PROJECTS

*Exploring Heritage Representation in CIDOC-CRM* (Cultural Heritage Informatics Initiative)
- Developing a React.js application for exploring the CIDOC-CRM ontology by querying SPARQL endpoints of institutions like the British Museum and Europeana

*Measuring Purchase Intention and Consumer Socialization on Instagram* (Independent)
- Developing a Universal Windows Platform (UWP) tablet application to simulate the Instagram user experience; will be used to measure (in conjunction with eye-tracking measures) patterns of user attention to product placement versus explicit advertising

*The Future of Data-Related Publication* (ICPSR and the University of Michigan iSchool)
- Gathered requirements (in shadowing and semi-structured interviews) to inform the design of a system to support improved bibliography comprehensiveness, usability, and ingestion processes at the Inter-university Consortium for Political and Social Research's (ICPSR)
- Modeled processes involved in maintaining ICPSR's bibliography of data-related publications in UML, in terms of actors, use cases, process inputs and outputs, and activities

*The Changing Character of Digital Divides* (The Quello Center, Michigan State University)
- Analyzed archival survey data for substantive shifts in responses about Internet usage (using SPSS 23.0)
- Analyzed survey instruments for methodological shifts in the study of Internet usage

## CONFERENCE PAPERS, PRESENTATIONS, AND PUBLICATIONS

Eight conference papers in the areas of social media advertising, cultural adaptation in advertising, business process analysis, accessibility and instruction, and digital divides

## PROFESSIONAL TRAINING

Udacity.com, Mountain View, CA                                     2015
Front-End Web Developer Nanodegree

## KEY PROFESSIONAL SKILLS

*Data analysis*
- Network analysis with Pajek and networkx (Python)
- Text data analysis and natural language processing with scikit-learn and nltk (Python)

*Database design & development*
- Relational data modeling in UML
- Normalization and model implementation in PostgreSQL and Microsoft Access

*Web development*
- Designing, developing, and securing server-side systems using the Flask Python web framework, and implementing data persistence using the SQLAlchemy ORM
- Building client-side systems with the Angular.js and Prototype.js JavaScript frameworks
- Deploying systems to Heroku and Microsoft Azure

*Communication*
- Writing technical and business documentation for training, knowledge management, and reports for decision-makers
- Conducting training on systems and processes for audiences including interns, new hires, and professional researchers

KEY ACCOMPLISHMENTS

- Designed and implemented JavaScript application for measuring aggression on Qualtrics, data from which are currently being used by a Michigan State research team in pursuit of a NIH grant
- Led development of a proof-of-concept web application for supporting the data analysis of the interdisciplinary team of researchers on the Michigan Stroke Transitions Trial (MISTT) project, and was subsequently asked by the team to consult on the project for further development